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Monday, August 7, 2017

Welcome Reception, General Poster Session, and Student Poster Session

Clayton Hall, Lobby
18:00 to 21:00

Plenary Lecture

Clayton Hall – Auditorium 128

17:00–17:10	Opening remarks	
17:10–18:00	Seeking simplicity in the flows of complex fluids .....56 *H. Stone (Princeton University)*	PL-1

General Poster Session

Clayton Hall - Lobby
Tina Adams, Lubrizol (Session Chair)

Predicting product shelf-life by using advanced kinetics and statistical analyses on forced degradation data .....N/A *D. Clenet (Sanofi-Pasteur), F. Imbert, P. Probeck, F. Ausar, N. Rahman*	GP-1
DSC measurement of gelation of aqueous methyl cellulose solutions containing polyethylene glycol and salt .....N/A *E. Shimoda (Hitachi High-Tech Science Corporation), Y. Nishiyama, Y. Nishimoto, S. Mochida*	GP-2
Thermal analysis of light emitting diodes .....N/A *H. Takahashi, Y. Kasai (Hitachi High-Tech Science Corporation), Y. Nishiyama, K. Shibata, B. Goolsby*	GP-3
Thermal analysis applications of printed circuit board using sample observation unit .....N/A *Y. Nishiyama, Y. Kasai (Hitachi High-Tech Science Corporation), B. Goolsby, K. Shibata*	GP-4
Heat transfer for large scale lithium-ion batteries module by triggering thermal runaway .....66 *J-M. Jiang (National Yunlin University of Science and Technology), Y-H. Chung, Y-W. Wang, C-M. Shu*	GP-5

Student Poster Session

Clayton Hall - Lobby
Tina Adams, Lubrizol (Session Chair)

Tuesday, August 8, 2017

Plenary Lecture

Clayton Hall – Auditorium 128

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8:10–8:55	Functional nanoscale polymers: Macromolecule design and self-assembly for materials pptimization .....55 *T. Epps (University of Delaware)*	PL-2

Honorary Session for Professor Wunderlich, In Memoriam & Polymers

Room 120
Joseph Menczel, Retired (Session Chair)

9:00–9:40	Composition and sequence mandated topological effects on nano-scaled supralattices in precisely functionalized giant molecules .....34 *Invited speaker: S. Cheng (University of Akron)*	Wun-1
9:40–10:00	Designed polymer crystallization for functional nanomaterials .....36 *C. Li (Drexel University)*	Wun-2
10:00–10:40	Break	
10:40–11:00	Testimonial .....N/A *J. Menczel and S. Cheng*	Wun-3
11:00–11:20	Understanding fiber spinning: The impact of fiber spinning .....37 *M. Jaffe (New Jersey Institute of Technology)*	Wun-4
11:20–12:00	Crystal-to-crystal transitions in a semicrystalline polymer .....32 *J. Menczel (Thermal Measurements LLC)*	Wun-5
12:00-13:30	Lunch	

13:30-14:10	Tg at the nanoscale with flash DSC .....37 *Invited speaker: S. Simon (Texas Tech University)*	Wun-6
14:10-14:30	Impact of molecular weight on the thermal stability and the miscibility of the poly(ε-caprolactone)/polystyrene binary blends .....30 *A. Mamun (Sultan Qaboos University), S. M. M. Rahman, S. Roland, R. Mahmood*	Wun-7
14:30-14:50	DSC study of impact modifier blocking .....33 *L. Judovits (Arkema), M. Hu*	Wun-8
14:50-15:30	Break	
15:30-15:50	How thermal analysis can benefit nuclear energy sector .....35 *J. Grebowicz (University of Houston-Downtown (UHD))*	Wun-9
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16:10-16:30	Structure and properties of super-hydrophobic membranes of poly(vinylidene fluoride) and poly(methyl methacrylate)-r-1H,1H,2H,2H-perfluorodecyl methacrylate for oil-water separation applications .....36 *N. Govinna (Tufts University), I. Sadeghi, D. Thomas, C. Schick, A. Asatekin, P. Cebe*	Wun-11
16:30-16:50	Calorimetry of silk polymorphs .....31 *P. Cebe (Tufts University), B. Partlow, D. Kaplan, A. Wurm, E. Zhuravlev, C. Schick*	Wun-12
16:50-17:10	Physical aging of pharmaceutical substances by advanced thermal analysis ..32 *M. Pyda (Rzeszow University of Technology), A. Czerniecka*	Wun-13
17:10-17:30	Thermal analysis measurements on drawn fibers .....33 *J. Menczel (Thermal Measurements LLC)*	Wun-14

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Room 119
Libby Glascoe, Lawrence Livermore National Lab
Ben Yancey, Lawrence Livermore National Lab (Session Chairs)

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9:20–9:40	Thermal detrimental effects of different states of charge in lithium-ion battery module system–detonation of single 18650 cell .....74 *B. Laiwang, Y-C. Cheng, Y-H. Chung, Y-W. Wang, C-M. Shu (National Yunlin University of Science and Technology)*	TH-2
9:40–10:00	Increased scrutiny for the chemical reactivity test (CRT) to determine the lifetime of thermally aged explosives .....74 *G. Guillen (Lawrence Livermore National Laboratory), E. Glascoe*	TH-3
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10:40-11:00	Thermal hazard assessment of reactive systems .....75 *L. Yang (Intertek)*	TH-4

Energetic Materials

Room 119
Queenie Kwok, NRCan Canadian Explosives Research Laboratory
Chi-Min Shu, National Yunlin University (Session Chairs)

11:00–11:40	Issues with analysis of homemade explosives .....15 *Invited speaker: J. Oxley (University of Rhode Island), J. Smith*	EM-1
11:40-12:00	On-going study on the thermal decomposition of nitrocellulose using pyrolysis-FTIR .....12 *Q. Kwok (NRCan Canadian Explosives Research Laboratory), R. Turcotte, S. Singh, M. Paquet*	EM-2
12:00-13:30	Lunch	

13:30-13:50	Cure kinetics of glycidyl azide polymer (GAP) with propargyl esters, bis-propargyl ether, and 4,4'-dicyanohepta-1,6-diyne, a possible energetic curing agent for azide polymers .....13 *J-C. St-Charles, M.E. Araya Marchena (École Polytechnique de Montréal), C. Dubois*	EM-3
13:50-14:10	Specific heat capacity measurement of pentaerythritol tetranitrate derivatives .....14 *H. Tian (Los Alamos National Laboratory), G. Brown*	EM-4
14:10-14:30	Mechanism research of thermal oxidation processes of red phosphorus based on kinetic approach .....14 *L. Jie (Nanjing University of Science and Technology), H. Guan*	EM-5

Kinetics

Room 119
Richard Lyon, Federal Aviation Administration (Session Chair)

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16:10-16:30	Parameterization of thermal degradation models for polymeric materials containing condensed-phase reactive additives .....48 *Y. Ding (University of Maryland, College Park), S. Stoliarov*	Kin-2
16:30-16:50	Prediction of shelf life of materials from forced degradation studies based on different analytical techniques by using advanced kinetic and statistical analysis .....49 *B. Roduit (AKTS AG), M. Hartmann, P. Folly, A. Sarbach, A. Dejeaifve, R. Dobson*	Kin-3
16:50-17:10	Assessing the effects of process temperature on crystallization kinetics of polyphenylene sulfide utilizing differential scanning calorimetry (DSC) .....47 *J. Browne (TA Instruments), K. Mohomed*	Kin-4
17:10-17:30	Reaction rates of solids at low conversion .....48 *R. E. Lyon (Federal Aviation Administration)*	Kin-5

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Wenwen Huang, Tufts University (Session Chair)

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9:20-9:40	Understanding the de- and rehydration kinetics of a lattice type pharmaceutical hydrate via microcalorimetry .....52 *J. Brum (GlaxoSmithKline), P. Skrdla, R. Forcino*	Phar-2
9:40-10:00	Stability modeling to predict bio-product shelf-life and evaluate impact of temperature excursions from the "cold chain" .....51 *D. Clenet (Sanofi-Pasteur)*	Phar-3
10:00-10:40	Break	
10:40-11:00	Solution spun protein-based polymer fibers for pharmaceutical and medical applications .....53 *X. Hu (Rowan University), D. Jao, X. Mou*	Phar-4
11:00-11:20	Performing solubility measurements using thermogravimetry .....54 *Y. Adhia (TA instruments - Waters LLC), C. Potter*	Phar-5
11:20-11:40	Microcalorimetry techniques for characterization of biopharmaceuticals .....54 *P. Vaitiekunas (TA Instruments)*	Phar-6

Biocalorimetry, Biomaterials, & Biopolymers

Auditorium 125
Xiao Hu, Rowan University (Session Chair)

13:30–13:50	Soybean oil-based thermosetting resins with methacrylated aromatic monomers as bio-based reactive diluent .....1 *Y. Zhang (Washington State University & Northeast Forestry University), Y. Li, Z. Gao, M. Kessler*	BBB-1
13:50-14:10	Characterization of regenerated polysaccharides/silk based blended biomaterials using ionic liquids .....1 *D. Salas de la Cruz (Rutgers University), J. Stanton, X. Hu, A. Hadadi, Y. Xue*	BBB-2

14:10-14:30	Silk-boron nitride composite materials .....2 *Y. Xue (Rowan University), X. Hu*	BBB-3
14:30-14:50	Thermally reversible gels and polymer single crystals of a bio-based, biodegradable polymer analyzed via differential scanning calorimetry .....3 *C. Liu (University of Delaware), B. Sobieski, I. Noda, B. Chase, J. Rabolt*	BBB-4
14:50-15:30	Break	
15:30-15:50	Thermal stability of glycerol/adipic acid hyperbranched poly(ester)s .....4 *B.A. Howell (Central Michigan University), T. Zhang, P. Smith*	BBB-5
15:50-16:10	Bio-relevant thermal analysis .....5 *M. Jaffe (New Jersey Institute of Technology)*	BBB-6
16:10-16:30	Combinatorial approach to the design of protein-based biopolymers .....5 *W. Huang (Tufts University), A. Tarakanova, M. Buehler, D. Kaplan*	BBB-7
16:30-16:50	Concurrent collection and post-drawing of individual electrospun nanofibers to enhance macromolecular alignment and mechanical properties .....4 *D. Brennan (Rowan University), V. Beachley*	BBB-8

Business Meeting
Room 120
17:30-18:00

Wednesday, August 9, 2017

Plenary Lecture

Clayton Hall – Auditorium 128

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8:10–8:55	Ultrasonic methods for characterization of polymeric materials .....55 *I. Alig (Fraunhofer Institute - LBF), D. Lellinger, H. Oehler*	PL-3

Rheology & Viscoelasticity

Room 120
Leela Rakesh, Central Michigan University
Sara Reynaud, Arkema, Inc. (Session Chairs)

and

Thermosets

Room 120
Michael R. Kessler, Washington State University (Session Chair)

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9:20-9:40	Using rheology to formulate and characterize foods .....58 *P. Rolfe (Malvern Instruments)*	RV-2
9:40-10:00	Characterizing anisotropy in polymers and composites using dynamic mechanical analysis in multiple deformation modes .....58 *S. Cotts (TA Instruments)*	RV-3
10:00-10:40	Break	

10:40-11:20	Hydrogels from mechanical gelation of flexible non-Brownian fibers suspension .....59 *Invited speaker: A. Perazzo (Princeton University), J. K. Nunes, S. Guido, H. A. Stone*	RV-4
11:20-11:40	Visualization of silica agglomerates breakdown in shear thickening fluids by rheology .....59 *R. Tao (National Institute of Standards and Technology)*	RV-5
11:40-12:00	Stochastic mesoscale modeling of transiently networked (viscoelastic) fluids ....59 *L. P. Cook (University of Delaware), L. Zhou*	RV-6
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13:30-13:50	Three rheological approaches to quantifying polymer branching .....60 *T. Chen (TA Instruments - Waters LLC)*	RV-7
13:50-14:10	***TAFDV Student Travel Award***: Activation, softness, and local structure in supercooled colloidal liquids .....63 *X. Ma (University of Pennsylvania), Z. Davidson, T. Still, R. Ivancic, S. Schoenholz, D. Sussman, A. Liu, A. Yodh*	RV-8
14:10-14:30	***TAFDV Student Travel Award***: Role of confinement and polymer-particle interaction on polymer capillary rise infiltration (CaRI) dynamics .....61 *J. L. Hor (University of Pennsylvania)*	RV-9
14:30-14:50	***NATAS Student Travel Award***: Effect of dissolution of magnesium alloy AZ31 on the rheological properties of phosphate buffer saline (PBS) .....62 *U. Riaz (Central Michigan University), L. Rakesh, W. Haider, I. Shabib*	RV-9
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15:30-15:50	Enhancing material characterization for the polymer industry .....62 *J. Eickhoff (Anton Paar USA), A. Shetty*	RV-10
15:50-16:10	Comparison of viscosity build to fluorescence probe wavelength shift for characterizing cure of epoxy resin .....62 *L. Yang (Intertek)*	RV-11

16:10-16:30	DMA testing of epoxy resins: The importance of dimensions .....76 *I. McAninch (US Army Research Laboratory - RDRL-WMM-G), G. Palmese, J. Lenhart, J. La Scala*	TS-1
16:30-16:50	Vitrification in commercial filled thermosets .....76 *K. Schoch, J. Clifton, P. Panackal, L. Nusbaum*	TS-2
16:50-17:10	Rheology of dilute polymer solution with and without nano-fillers using coarse grained simulation and modeling .....63 *L. Rakesh (Central Michigan University)*	RV-13

Honorary Session on Lifetime Prediction, Joseph H. Flynn in Memoriam

Room 119

Chris White, NIST (Session Chair)

9:00-9:20	Joe Flynn remembered .....38 *R. Blaine (retired), C. Guttman*	JHF-1
9:20-9:40	The deep glassy state: A paradigm challenging "unexplored" region .....38 *Invited speaker: G. McKenna (Texas Tech University), H. Yoon*	JHF-2
9:40-10:00	Polyethylene aging in accelerated and outdoor environments. .....39 *C. White (NIST), L. Sung, D. Jacobs, J-H. Kim, L. Perry, C-Y. Lu, H-C. Hsueh*	JHF-3
10:00-10:40	Break	
10:40-11:00	Using thermal gravimetric analysis to quantify sorption and diffusion of moisture in polymeric and non-polymeric materials: Experimental methods and high fidelity modeling .....39 *E. Glascoe (Lawrence Livermore National Laboratory), Y. Sun, H. Sharma, S. Harley*	JHF-4
11:00-11:20	Using thermal analysis to develop strategies for preparing epoxy clay hybrid (ECH) nanocomposite enhanced fiber-reinforced polymer (FRP) composites ...40 *G. Holmes (National Institute of Standards and Technology)*	JHF-5
11:20-12:00	Practice for using thermogravimetric analysis on evaluating thermal endurance properties for polybutylene terephthalate (PBT) .....41 *H. Chiang (Underwriters Laboratories, Inc.), T. Fabian, D. Francke, L. Judovits*	JHF-6

Chemical Stability, Polymer Degradation, & Flammability

Room 119
Janis Matison, Silar (Session Chair)

13:30-14:10	Thermoresponsive particles to test the Kovacs signatures in glass-forming colloids .....6 *Invited speaker: G. McKenna (Texas Tech University), X. Peng, Q. Li, S. Banik*	CS-1
14:10-14:30	Variations on limiting oxygen concentration under different scenarios of ethane and ethylene reaction system via 20-L-apparatus .....7 *J-R. Lin, S-C. Ho, T-H. Lin, C-M. Shu, J-R. Chen (Hsiuping University of Science and Technology (HUST))*	CS-2
14:30-14:50	Fast thermoanalytical profiling of petrochemical samples by evolved gas analysis using photoionsation-MS and ultra-fast gas chromatography .....8 *R. Zimmermann (JMSC (Helmholtz Zentrum München/CMA and University of Rostock)), T. Streibel, S. Wohlfahrt, A. Ulbrich, C. Grimmer, A. Walte, S. Ehlert, T. Denner*	CS-3
14:50-15:30	Break	
15:30-15:50	Thermal stability of flame retardants derived from the biomolecules, isosorbide and castor oil .....9 *B. A. Howell (Central Michigan University), Y. Daniel, E. Ostrander*	CS-4
15:50-16:10	Methodologies for the detection and quantification of heterogeneous defects in silicone networks .....9 *R. Maxwell (Lawrence Livermore National Laboratory), J. Rodriguez, J. Lewicki, J. Crowhurst, C. Fox*	CS-5
16:10-16:30	Thermal degradation of platinum(II) endcapped glycerol/ adipic acid hyperbranched poly(ester)s .....9 *U. Huynh (Central Michigan University), B. A. Howel*	CS-6
16:30-16:50	Thermal degradation of phosphorus esters of methyl 3,5-dihydroxybenzoate .....10 *E. Ostrander (Central Michigan University), B.A. Howell*	CS-7
16:50-17:10	Thermal diffusivity and composite decomposition .....10 *S. Sauerbrunn (University of Delaware - CCM)*	CS-8

Fast Scanning Methods and Novel Methodology

Room 125
Juergen Schawe, Mettler-Toldeo (Session Chair)

9:00–9:20	Inkjet-assisted nanocalorimetry for trace detection ....15 *F. Yi (NIST), J. Lawrence, T. Forbes, M. Staymates, J. G. Gillen, D. LaVan*	FSM-1
9:20-9:40	Heat capacity spectroscopy at thermal and reaction-driven glass transition studied by stochastic temperature modulated calorimetry .....15 *F. Böhm, D. Lellinger, I. Alig (Fraunhofer Institute - LBF*)	FSM-2
9:40-10:00	Investigation of the combustion characteristic temperatures of carbon pellets with different kinds of biochars .....16 *B. Li (Zhengzhou Tobacco Research Institute of CNTC), J. Cai, K. Zhang, M. Zhang, D. Lu, N. Deng, W. Zhu, L. Wang*	FSM-3
10:00-10:40	Break	
10:40-11:00	Heat of fusion of polymer crystals by fast scanning calorimetry .....17 *P. Cebe (Tufts University), D. Thomas, J. Merfeld, B. Partlow, D. Kaplan, R. G. Alamo, A. Wurm, E. Zhuravlev, C. Schick*	FSM-4
11:00-11:20	Use of fast-scanning thermal methods to address industrially relevant challenges .....18 *K. Kearns (Dow Chemical)*	FSM-5
11:20-11:40	Fast scanning calorimetry (FSC) of Se-In-Ag glassy alloy .....17 *D. Sharma (LC), A. Kumar, R. Shukla*	FSM-6
11:40-12:00	Novel technique for quantitative fast scanning calorimetry on electrospun fibers .....18 *D. Thomas (Tufts University), N. Govinna, C. Schick, P. Cebe*	FSM-7

Instrumentation

Auditorium 125
Kdaine Mohomed, TA Instruments
Eric Schoch, Northrop Grumman (Session Chairs)

13:30-13:50	Evolved gas analysis using netzsch perseus TG-FTIR .....46 *D. VanNess (Netzsch Instruments North America LLC)*	Inst-1
13:50-14:10	Thermal analysis coupled to ultra-high mass resolution FTICR mass spectrometry: Comprehensive molecular profiling in evolved gas analysis .....46 *R. Zimmermann (JMSC (Helmholtz Zentrum München/CMA and University of Rostock)), C. Rüger, A. Neumann, M. Sklorz, S. Ehlert*	Inst-2
14:10-14:30	THEMYS: New innovative thermal analysis platform – capabilities and applications .....47 *R. Rahi (SETARAM Inc.), J. Mangler, Y. Cherisien*	Inst-3

Thermal Conductivity

Auditorium 125
Adam Harris, CTherm (Session Chair)

14:30-14:50	Theoretical, computational, and experimental validation of the modified transient plane source (MTPS) method .....68 *M. Emanuel, R. Bateman, S. Ackermann (Thermal Analysis Labs)*	TC-1
14:50-15:30	Break	
15:30-15:50	Status of reference materials and standards for thermal effusivity .....69 *R. Blaine (retired)*	TC-2
15:50-16:10	Relationship between thermal conductivity and saturation conditions in soils interested by very shallow geothermal systems: An overview of ITER Project .....69 *E. Di Sipio (Friedrich-Alexander University of Erlangen-Nuremberg), D. Bertermann*	TC-3
16:10-16:30	Investigation of polymer thermal anisotropy through melt and recrystallization using the hot disk transient plane source (TPS) technique .....72 *M. Thomas (Thermtest Inc.), D. Hume, D. Cederkrantz, R. Dinwiddie*	TC-4

16:30-16:50	Determination of rocks thermal conductivity for shallow geothermal application: from laboratory scale to thematic maps generation for some Italian case studies .....71 *E. Di Sipio (Friedrich-Alexander University of Erlangen-Nuremberg), A. Galgaro, M. Cultrera, G. Dalla Santa*	TC-5
16:50-16:10	Characterization of the nucleation efficiency of carbon nanotubes for polymer crystallization .....18 *J.E.K. Schawe (Mettler-Toledo)* **Note: This is a Fast Scanning Methods presentation**	FSM-8

Food Science and Technology

Room 123

Neil Mukherjee, Mondelez International (Session Chair)

13:30-14:10	Thermal analyses reveal the role of biophysical features of edible plant-tissue in the physical quality and digestibility of food systems .....20 *Invited speaker: M. Martinez Martinez (Purdue University)*	FST-1
14:10-14:30	Characterization of moisture mobility and diffusion in tobacco materials during drying by the TG-NMR analysis .....19 *W. Zhu (Zhengzhou Tobacco Research Institute of CNTC), L. Han, L. Chen, B. Li*	FST-2
14:30-14:50	Water acting as a plasticizer and antiplasticizer on food ingredients .....20 *D. Burnett (Surface Measurement Systems), A. Garcia*	FST-3
14:50-15:30	Break	
15:30-15:50	Study on thermophysical properties of different kind's tobacco .....21 *D. Lu (Zhengzhou Tobacco Research Institute of CNTC), Y. Ma, M. Zhang, L. Wang, K. Zhang, B. Li, C. Liu, X. Liu*	FST-4
15:50-16:10	Thermal analysis of microcapsules .....22 *Invited speaker: J. Oxley (Southwest Research Institute)*	FST-5
16:10-16:30	Investigation of polyol / water interactions in chewing gum using thermal analysis .....22 *C. Norton, C. Stamboulides, I. Mukherjee (Mondelez International)*	FST-6

Cocktails – Ballroom 101 A & B
18:30 to 19:00

Banquet – Ballroom 101 A & B
19:00 to 20:00

Awards – Ballroom 101 A & B
20:00 to 21:00

DJ – Ballroom 101 A & B
21:00 to 23:00

Thursday, August 10, 2017

METTLER Award in Thermal Analysis – Plenary Lecture
sponsored by Mettler Toledo

Clayton Hall – Auditorium 125

8:10-8:20	Opening remarks	
8:20-9:05	An overview of kinetic models for lithium ion batteries induced by thermal runaway reaction .....56 *W-C. Chen, Y-W. Wang, C-M. Shu (National Yunlin University of Science and Technology)*	PL-4

SETARAM Student Lecture
sponsored by Setaram

Clayton Hall – Auditorium 125

9:05-9:25	Combining the power of DSC and X-ray diffraction: Structural analysis of self-organized supramolecular assemblies .....29 *B. Partridge (University of Pennsylvania), M. Peterca, D. Sahoo, H-J. Sun, P. Heiney, P. Leowanawat, X. Zeng, G. Ungar, V. Percec*	PL-5

Honorary Symposium on Composites, Richard Wool in Memoriam

Room 120
Joseph Deitzel, CCM
John LaScala US Army Research Laboratory (Session Chairs)

9:30 – 9:50	Richard Wool: Testimonials .....44 *S. Sauerbrunn (University of Delaware - CCM)*	RW-1
9:50-10:10	Environmentally friendly high performance bio-derived polymers for DoD applications .....41 *J. La Scala (Army Research Laboratory), G. Palmese, J. Stanzione, B. Harvey, G. Yandek, W. Eck, S. Kumar Yadav*	RW-2

10:10-10:30	Strategic assemblies of modified xylochemicals for new bio-based polymers ...42 *J. Stanzione (Rowan University)*	RW-3
10:30-11:00	Break	
11:00-11:20	Bio-based composites from soybean oil and feather fibers for electronic applications .....42 *Invited speaker: M. Zhan (W. R. Grace Co.-Conn), R. Wool*	RW-4
11:20-11:40	Functionalization of pan-based carbon fiber for improved wetting and interfacial shear strength .....43 *M. Kubota (University of Delaware), S. Sauerbrunn, J. Deitzel, J. W. Gillespie, Jr.*	RW-5
11:40-12:00	Richard Wool: The expert witness .....44 *S. Sauerbrunn (University of Delaware - CCM), K. Reno*	RW-6

Chemical Stability, Polymer Degradation, & Flammability

Room 119

Janis Matison, Silar (Session Chair)

9:30-9:50	Thermal stability of the bis-DOPO ester of N-phenyl-4,4-di(4-hydroxyphenyl)pentanamide ....12 *H. Fulco (Central Michigan University), B.A. Howell*	CS-9
9:50-10:10	Thermal stability of phosphonate and phosphate esters of 4,4'-bishydroxydeoxybenzoin .....11 *G. Lienhart (Central Michigan University), B.A. Howell*	CS-10
10:10-10:30	Thermal properties of oligomeric esters from phosphorus-containing butanedioic acids .....11 *V. Hill (Central Michigan University), B.A. Howell*	CS-11

Inorganic & Ceramic Materials / High Temperature Analysis

Room 119
Marc-Antoine Thermitus, NETZSCH
Yongsheng Zhang, North China Electric Power University (Session Chairs)

11:00-11:20	***NATAS Student Travel Award***: Volatilization of arsenic, mercury and other volatiles during biomass combustion .....44 *Y. Zhang (North China Electric Power University), W-P. Pan*	Inorg-1
11:20-11:40	Optimization of solution treatment parameters for aluminum alloy powders through the use of thermal analysis .....45 *C. Walde (WPI), D. Cote, R. Sisson, V. Champagne*	Inorg-2

General Session

Auditorium 125
Tara Fortin, National Institute of Standards and Technology (Session Chair)

9:30-9:50	Ultrapurification of monomers and other small organic molecules by zone melting .....26 *A. McGhie (LRSM, University of PA), G.J. Sloan*	GS-1
9:50-10:10	The world of oxidative analysis using pressure differential scanning calorimetry .....24 *T. Adams (The Lubrizol Corporation)*	GS-2
10:10-10:30	Thermophysical properties of polyol ester lubricants .....25 *T. Fortin (National Institute of Standards and Technology)*	GS-3
10:30-11:00	Break	
11:00-11:20	Thermally-induced chemical transformations in short peptides .....26 *D. V. Soldatov (University of Guelph), F. I. Ali, A. J. Smith*	GS-4
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End of Conference
